Amendments to the Claims:

The following listing of claims will replace all prior versions of claims presented in the application.

1. (Currently amended) A vaccine composition which is protective against equine arteritis virus ~~arterivirus~~ (EAV) infections in horses and induces a cellular immune response, consisting of ~~comprising a~~ open reading frame nucleic acids (ORF) 2, SEQ ID NO:5 or SEQ ID NO:9 (ORF 5), and SEQ ID NO:7 (ORF 7) of EAV, wherein ORF 2 is the nucleotide sequence as set forth in SEQ ID NO:2 or a functional variant thereof, wherein said variant carries nucleic acid exchanges, deletions or insertions which amount up to 10% of the nucleotide acids of the nucleotide sequences set forth in SEQ ID NO:2 ~~ORF 5 and/or ORF7 of EAV~~.

2. (Cancelled)

3. (Currently amended) The vaccine composition according to claim 1, wherein said vaccine composition further comprises one or several ORF(s) selected from the group of SEQ ID NO:1 (ORFs 1a and 1b) ~~ORF 1a, ORF 1b~~, SEQ ID NO:3 (ORF 3) ~~ORF 3~~, SEQ ID NO:4 (ORF 4) ~~ORF 4~~, and SEQ ID NO:6 (ORF 6) ~~ORF 6~~.

4. (Previously presented) The vaccine composition according to claim 1, wherein said nucleic acid is cDNA.

5. (Previously presented) The vaccine composition according to claim 1, wherein said vaccine composition comprises one or several nucleic acid vectors each comprising said ORF or ORFs.

6. (Previously presented) The vaccine composition according to claim 5, wherein said vector(s) is/are expression vector(s).

7. (Previously presented) The vaccine composition according to claim 6, wherein said expression vector(s) comprise(s) a eukaryotic cis-acting transcription/translation sequence functionally linked to said ORF(s).

8. (Previously presented) The vaccine composition according to claim 7, wherein said expression vector is selected from the group of pCR3.1, pcDNA3. I/His A, pcDNA3.1/His B, pcDNA3.1/His C, and pDisplay (pD).

9. (Previously presented) The vaccine composition according to claim 1, further comprising the nucleic acid encoding equine interleukin 2 (IL-2) or a vector or expression vector comprising said nucleic acid encoding IL-2.

10. (Currently amended) The vaccine composition according to claim 1, further comprising a pharmaceutically acceptable carrier or excipient.

11. (Previously presented) The vaccine composition according to claim 1, further comprising one or several adjuvants selected from the group of Muramyl Dipeptide (MDP), Montanide 720, Poly Inosine:Cytosine (Poly I:C) or plasmid DNA comprising unmethylated cytosine, guanine dinucleotide sequence motifs (CpG).

12. (Previously presented) The vaccine composition according to claim 1, consisting of expression vectors comprising ORF2, ORF5 and ORF7 of EAV, respectively, and optionally carrier, excipients or adjuvants and an expression vector comprising the nucleic acid encoding IL-2.

13. (Cancelled).

14. (Previously presented) The vaccine composition according to claim 1, wherein the nucleic acid or nucleic acid vector or expression vector is encapsulated into cationic liposomes.

15. (Currently amended) A nucleic acid vector comprising nucleic acid ~~selected from the group of ORF 1a, ORF 1b, ORF 2, ORF 3, ORF 4, ORF 5, ORF 6 and/or ORF7~~ consisting of comprising a open reading frame nucleic acids (ORF) 2, SEQ ID NO:5 or SEQ ID NO:9 (ORF 5), and SEQ ID NO:7 (ORF 7) of EAV, wherein ORF 2 is the nucleotide sequence as set forth in SEQ ID NO:2 or a functional variant thereof, wherein said variant carries nucleic acid exchanges, deletions or insertions which amount up to 10% of the nucleotide acids of the nucleotide sequences set forth in SEQ ID NO:2 ~~ORF 5 and/or ORF7 of EAV~~.

16. (Previously presented) The nucleic acid vector according to claim 15, wherein said nucleic acid is DNA.

17. (Previously presented) The nucleic acid vector according to claim 15, wherein said nucleic acid vector is an expression vector.

18. (Previously presented) The nucleic acid vector according to claim 17, wherein said expression vector comprises a eukaryotic cis-acting transcription/translation sequence functionally linked to said nucleic acid(s) specific for said ORF(s).

19. (Previously presented) The nucleic acid vector according to claim 17, wherein said expression vector is selected from the group of pCR3.1, pcDNA3.1/His A, pcDNA3.1/His B, pcDNA3.1/His C, and pDisplay (pD).

20. (Currently amended) The nucleic acid vector according to claim 15, wherein said nucleic acid vector comprises a nucleic acid selected from the group of SEQ ID ~~No.~~ NO:2, SEQ ID ~~No.~~ NO:5, SEQ ID ~~No.~~ NO:9 and/or SEQ ID ~~No.~~ NO:7.

21. (Previously presented) A method for prophylaxis or treatment of EAV infection in a horse, comprising (i) coating one or several nucleic acid vector(s) according to any one of claims 15 to 20 onto carrier particles; (ii) accelerating the coated carrier particles into epidermal cells of the horse in vivo; and (iii) inducing a protective or therapeutic immune response in said horse

upon or after exposure to EAV; and (iv) monitoring the reduction of EAV-associated symptoms or the reduction of horizontal or vertical transmission.

22. (Previously presented) The method according to claim 21, wherein the carrier particles are gold.

23. (Previously presented) A method for prophylaxis or treatment of EAV infection in a horse, comprising (i) injecting a vaccine composition according to claim 1 or one or several nucleic acid vector(s) according to any one of claim 15 into muscular cells of the horse in vivo; and (ii) inducing a protective or therapeutic immune response in said horse upon or after exposure to EAV, and (iii) monitoring the reduction of EAV-associated symptoms or the reduction of horizontal or vertical transmission.